

GenCore version 5.1.6
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OM protein - protein search, using sw model
 Run on: December 15, 2003, 14:50:12 ; Search time 21 Seconds
 (without alignments)
 1419.633 Million cell updates/sec

Title: US-09-831-805a-6
 Perfect score: 1635
 Sequence: 1 MALLRRPPLRLCARLPPFFL.....VNYIRTDDEGGDFRHKSFFVI 310

Scoring table: BLOSUM62
 Gapop 10.0 , Gapext: 0.5

Searched: 283308 seqs, 9616882 residues

Total number of hits satisfying chosen parameters: 283308

Minimum DB seq length: 0
 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
 Maximum Match 100%
 Listing first 45 summaries

Database : PIR 76;*
 1: pir1;*
 2: pir2;*
 3: pir3;*
 4: pir4;*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	419	25.6	299	2 S56749	junctional adhesion molecule precursor - human
2	187	11.4	725	2 JE0099	junctional adhesion molecule precursor - human
3	186	11.4	1088	1 IJXJNL	junctional adhesion molecule precursor - human
4	180.5	11.0	1894	2 C44689	junctional adhesion molecule precursor - human
5	180	11.0	333	2 AJ31923	junctional adhesion molecule precursor - human
6	177	10.8	725	2 JE0100	junctional adhesion molecule precursor - human
7	177	10.8	1092	1 JN06335	junctional adhesion molecule precursor - human
8	171.5	10.5	725	1 IJMSNG	junctional adhesion molecule precursor - human
9	171.5	10.5	1115	1 IJMSNL	junctional adhesion molecule precursor - human
10	170.5	10.4	858	1 IJUTNC	junctional adhesion molecule precursor - human
11	169.5	10.4	1912	2 AS56178	junctional adhesion molecule precursor - human
12	164.5	10.1	1051	2 AS9712	junctional adhesion molecule precursor - human
13	164.5	10.1	3707	2 SJ2525	junctional adhesion molecule precursor - human
14	163.5	10.0	853	1 IJPNOC	junctional adhesion molecule precursor - human
15	162.5	9.9	6642	2 T29757	junctional adhesion molecule precursor - human
16	161.5	9.9	1612	2 T30805	junctional adhesion molecule precursor - human
17	161	9.8	7962	2 I30346	junctional adhesion molecule precursor - human
18	159.5	9.8	1033	2 SJ2247	junctional adhesion molecule precursor - human
19	159	9.7	538	2 JC2457	junctional adhesion molecule precursor - human
20	159	9.7	123	2 PNU568	junctional adhesion molecule precursor - human
21	159	9.7	4162	2 T42633	junctional adhesion molecule precursor - human
22	157	9.6	1907	2 S50893	junctional adhesion molecule precursor - human
23	156	9.5	1091	1 IJCHNL	junctional adhesion molecule precursor - human
24	156	9.5	1501	2 I58148	junctional adhesion molecule precursor - human
25	156	9.5	1863	2 S46217	junctional adhesion molecule precursor - human
26	155.5	9.5	761	1 IJHNG	junctional adhesion molecule precursor - human
27	155.5	1259	2 A43420	junctional adhesion molecule precursor - human	
28	155.5	9.5	1268	1 A39620	junctional adhesion molecule precursor - human
29	154.5	9.4	495	2 T23750	junctional adhesion molecule precursor - human

ALIGNMENTS

coxsackie- and ade
 hypothetical prote
 hypothetical prote
 transmembrane rece
 carcinoembryonic a
 protein-tyrosine-p
 protein-tyrosine-p
 leukocyte antigen-
 biliary glycoprote
 leukocyte antigen-
 cell surface glyco
 protein-tyrosine k
 protein-tyrosine k
 50k glycoprotein p
 neurotramin - rat

QY 8 RURLCARLPPFLLIRFGCLIGAVNLKSSNRTPVQFESEVLSCLITDQSQTSPRIEW 67
 QY 9 RKLCL---FLATLICSLAIGSYVHSSBEPVIRPPNNPVKLCAY- SGFSSPRVW 62

Db QY 68 KKIQDQQTTYFFDNKIQKQDLAGRABILGKTSLSKLTWNVTRDSDALYRCEVARNRKEID 127
 Db 63 KFDQGDTTRILVYQYNNKKTASYEDRVTFL-PTGITFKSVIRDTGIVTC-MVSEEGNSYG 120

QY 128 EIVELTQVQKPTVPRVPAVPGKMATRHCQSEGHRPHYWWRNQVPLPTDSRAN 187
 Db 121 EVVKVILVLPVKPWTNNTSATTAGNRAVTCSTQDGSPEYVWPKDQIUMPTNPKST 180

QY 188 PRPRNNSHSUNSETGTVIIFVAVKHDQGQYCLIASNDAGSARCEQ-EMEVYDNLIGII 246
 Db 181 RAFSNSSYYVNPPTGIVNFDPLASADTGEYSCEARNGYGTPEMTSNAVRMEAVERNVGIV 240

QY 247 GQVLLVIAVNLITLGICCAVRRGIFINNKODGES---YKNPGKEDGVWVIRTBEGDF 302

F;20-1088/Product: neural cell adhesion molecule, long domain form #status predicted <IMM1>
 F;20-803-/Product: neural cell adhesion molecule, short domain form #status predicted <IMM2>
 F;20-705/Domain: extracellular #status predicted <EXT>
 F;34-95/Domain: immunoglobulin homology <IMM1>
 F;129-188/Domain: immunoglobulin homology <IMM2>
 F;149-153/Region: heparin binding #status predicted
 F;158-162/Region: heparin binding #status predicted
 F;225-284/Domain: immunoglobulin homology <IMM3>
 F;311-381/Domain: immunoglobulin homology <IMM4>
 F;413-475/Domain: immunoglobulin homology <IMM5>
 F;510-589/Domain: fibronectin type III repeat homology <FN3A>
 F;512-589/Domain: fibronectin type III repeat homology <FN3B>
 F;705-723/Domain: transmembrane #status predicted <TMM>
 F;724-1089/Domain: intracellular #status predicted <INT>
 F;411-93,156-186,232-282,323-319,407-473/Disulfide bonds: #status predicted
 F;219,310,341,417,443,472/Binding site: carbohydrate (An)(covalent) #status predicted

Query Match 11.4%; Score 186; DB 1; Length 1088;
 Best Local Similarity 29.9%; Pred. No. 3.1e-07;
 Matches 63; Conservative 30; Mismatches 82; Indels 36; Gaps 12;

Qy	30 GAVNLK-----SSNRTPVQVQPRFESVLSLCTIDSQNSDPR-IEWK-KIQDQTTYVFFDN 82
Db	105 GTVNLLKIQYKULFKPQAPTPQBFKEGDAVILCDVSSSIPSIITWRKGKD----VIFKK 159
Qy	83 KIQGDLAGRABILGKSLKTWNVRRLSALYRCE--WVARND--RKEIDEV-IELTVQV 137
Db	160 DV-----RFVVLANNYLOTRGKIKTDGTYRCERGIRLARGEINYKDIQIVNVPPTQ 213
Qy	138 KPVTPVCPRVKAVPKMATHQCSSEGHPRPHYSWYRNDVPLPIDSRAVNRFRNSSLH 197
Db	214 RQL---RVNATANHMASVVLSC-DADGDPPELSWILKKGSPPI-BDGEEKLSF---- 260
Qy	198 NSETGTLVFTAVHKODDSQGYCIAASDAGSA 228
Db	261 NEDQSEMTTIIHVEKODDEAECSCIANQAGEA 291

F;1542/Binding site: substrate phosphate (Arg) #status predicted
 F;1826/Active site: Cys (phosphocysteine intermediate) #status predicted
 F;1832/Binding site: substrate phosphate (Arg) #status predicted
 Query Match 11.0%; Score 180.5; DB 2; Length 1894;
 Best Local Similarity 28.8%; Pred. No. 1.7e-05;
 Matches 72; Conservative 34; Mismatches 75; Indels 69; Gaps 15;
 Qy 3 IRRPPRURL---CARLPPFLLILPRGLIGAVNLKSSNRTPVQESVELSCIT 56
 Db 11 VRRPLSILTTPLCACACTPPRF-----TRPVDTGWSGGYASIFIC 52
 Qy 57 DSQTSPRR--I EW---KKQDQEQTIVPFNPKIQLDASPAELIGKTSKIKWNTRDS 110
 Db 53 QA-TGDPRPKLTWNKKGKVKVSNQRFEVTFD-----GSGSVLRQLR---TPRDE 100
 Qy 111 ALYRCVEVWARDRKEIDEIVELTIVQKPVTPVCRVKAVPGKOM-----ATL 158
 Db 101 ALYEC---VASHNNGEL-SVSRTRITVRED---QPRGPFTIDKQPLKQVVERRTAM 152
 Qy 159 HQCQESBGGPRPHYSWYRNDVPLTDSRANPRFRNNSHHLNET-GTIVFTAVHKDQY 217
 Db 153 ICAAS-GNPDPEBTIWFKDFLFLVDT-SNNNGRKK---QLRSESIGALQIEQSEEDQKY 206
 Qy 218 VCIASNDAGS 227
 Db 207 ECVATNSAGT 216

RESULT 5
 A31923
 amalgam protein precursor - fruit fly (*Drosophila melanogaster*)
 C;Species: *Drosophila melanogaster*
 C;Date: 18-Oct-1989 #sequence_revision 18-Oct-1989 #text_change 21-Jul-2000
 C;Accession: A31923
 C;Molecule type: DNA
 C;Accession: A31923
 R;Seeger, M.A.; Haffley, L.; Kaufman, T.C.
 Cell 55, 589-600, 1988
 A;Title: Characterization of amalgam, a member of the immunoglobulin superfamily from Drosophila melanogaster
 A;Reference number: A31923; MUID:89028670; PMID:3141062
 A;Cross-references: GB:MB23561; NID:9156920; PIDN:AAA28367.1; PID:9156921
 C;Gene: FlyBase:Amn
 A;Cross-references: FlyBase:FBgn0000071
 Query Match 11.0%; Score 180; DB 2; Length 333;
 Best Local Similarity 26.8%; Pred. No. 2.3e-07; Length 333;
 Matches 52; Conservative 39; Mismatches 83; Indels 20; Gaps 5;
 Qy 35 KSSNRRTIVWQEEFESVELSCITDSQTSPRFLWKKIODEQTIVFFDNKIQGLLAGRAEI 94
 Db 143 ETPKPSLTVTNCLETC-HANGFPRKPTSWAR-----EHRAVMPAGHL 187
 Qy 95 LCKTSLKLUWVTRRDSALYRPEVVARNDRKEIDEIVELTIVQKPVTPVCRVKAVPGK 154
 Db 188 LAEPTIRIRSNHRMDRGYIC--IAQNGEGQDPKRIJRVESFRPLIAQPRKIAQWSH 245
 Qy 155 MATHLCOSEBGGPRPHYSWYRNDVPLTDSRANPRFRNNSHHLNSTGTLFTAVHKDS 214
 Db 246 SAELEC-SVQGYTAPFTVWHKNGVPL-QSSRHEVANTASSSGITTSVLRIDSVGEEDP 302
 Qy 215 GOYCYTASNDAGSA 228
 Db 303 GDYVGNATNKGHA 316

RESULT 6
 JE0100 neural cell adhesion molecule 2 - African clawed frog
 N;Alternate names: NCAM²
 C;Species: *Xenopus laevis* (African clawed frog)

RESULT 7
 JN0635
 neural cell adhesion molecule 2 precursor - African clawed frog
 C;Species: *Xenopus laevis* (African clawed frog)
 C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 22-Jun-1999
 C;Accession: JN0635
 R;Toniissen, K.F.; Krieg, P.A.
 Gene 127, 243-247, 1993
 A;Title: Two neural-cell adhesion molecule (NCAM)-encoding genes in *Xenopus laevis* are expressed in different tissues
 A;Reference number: JN0635; MUID:9327339; PMID:684721
 A;Accession: JN0635
 A;Molecule type: mRNA
 A;Residues: 1-1092 <TON>
 A;Cross-references: GB:MT6710; NID:9214611; PIDN:AAA49910.1; PID:9214612
 C;Comment: NCAM mediates cell-cell adhesion via homophilic binding with another NCAM molecule
 C;Gene: NCAM2
 C;Superfamily: neural cell adhesion molecule; fibronectin type III repeat homology; immunoglobulin superfamily; alternative splicing; cell adhesion; duplication; heparin binding; sialoglycans
 F;1-19/Domain: signal sequence #status predicted <SIG>
 F;20-1092/Domain: neural cell adhesion molecule 2 #status predicted <NCAM>
 F;20-705/Domain: extracellular #status predicted <EXT>
 F;34-95/Domain: immunoglobulin homology <IMM1>
 F;129-188/Domain: immunoglobulin homology <IMM2>
 F;149-153/Region: heparin binding #status predicted
 F;158-162/Region: heparin binding #status predicted
 F;317-381/Domain: immunoglobulin homology <IMM3>
 F;413-475/Domain: immunoglobulin homology <IMM4>
 F;512-589/Domain: fibronectin type III repeat homology <FN3B>
 F;619-680/Domain: fibronectin type III repeat homology <FN3B>
 F;706-723/Domain: transmembrane #status predicted <TM>
 F;724-1092/Domain: intracellular #status predicted <IMR>
 F;41-93/136-186/230-282/323-379/420-473/Disulfide bonds: #status predicted
 F;219,310,341,417,443,472/Binding site: carbohydrate (Asn) (covalent) #status predicted

RESULT 6
 JE0100 neural cell adhesion molecule 2 - African clawed frog
 N;Alternate names: NCAM²
 C;Species: *Xenopus laevis* (African clawed frog)

Best Local Similarity 29.5%; Pred. No. 1.7e-06; Matches 62; Conservative 28; Mismatches 86; Indels 34; Gaps 11;

Best Local Similarity 27.3%; Pred. No. 3e-06; Matches 63; Conservative 41; Mismatches 84; Indels 43; Gaps 12;

Qy 30 GAVNLKSSNR---TPVQEESVELSCITNSQSQTSPR-TEWK-KIQDEQTTIVPFDN 82
C;Species: Mus musculus (house mouse)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 31-Dec-2000
C;Accession: A29673; S00382; A44290
R;Barthels, D.; Santoni, M.J.; Wille, W.; Ruppert, C.; Chaix, J.C.; Hirsch, M.R.; Fontec
EMBO J. 6, 907-914, 1987
A;Title: Isolation and nucleotide sequence of mouse NCAM cDNA that codes for a Mr 79,000
A;Reference number: A29673; MUID:87246524; PMID:355553
A;Accession: A29673
A;Molecule type: mRNA
A;Residues: 1-725 <BAR>
A;Cross-references: EMBL:Y00051; NID:953342; PIDN:CAA68263.1; PID:953343
R;Barbas, J.A.; Chaix, J.C.; Steinmetz, M.; Goridis, C.
EMBO J. 7, 625-632, 1988
A;Title: Differential splicing and alternative polyadenylation generates distinct NCAM t
A;Reference number: S00382; MUID:88283628; PMID:3396534
A;Accession: A44290
A;Molecule type: DNA
A;Residues: 642-656, D', 658-725 <BA2>
A;Cross-references: EMBL:X07195
R;Rougon, G.; Marshak, D.R.
J. Biol. Chem. 261, 3396-3401, 1986
A;Title: Structural and immunological characterization of the amino-terminal domain of m
A;Reference number: A44290; MUID:86140120; PMID:3512556
A;Accession: A44290
A;Molecule type: protein
A;Residues: 20-36 <RO1>
C;Comment: NCAM mediates cell-cell adhesion via homophilic binding with another NCAM mol
C;Genetics: NCAM
A;Gene: NCAM
A;Map position: 9
A;Introns: 701/1
C;Supfamily: neural cell adhesion molecule; fibronectin type III repeat homology; immu
C;Keywords: alternative splicing; cell adhesion; duplication; heparin binding; membrane
F1-1-/Domain: signal sequence #status predicted <SIG>
F1-98-/Domain: immunoglobulin homology <IMM1>
F13-191-/Domain: immunoglobulin homology <IMM2>
F15-15-/Region: heparin binding #status predicted
F16-1-165-/Region: heparin binding
F2-28-290-/Domain: immunoglobulin homology <IMM3>
F26-27-/Region: NCAM binding #status predicted
F32-3-388-/Domain: immunoglobulin homology <IMM4>
F42-40-482-/Domain: immunoglobulin homology <IMM5>
F51-59-/Domain: fibronectin type III repeat homology <FN3A>
F62-685-/Domain: fibronectin type III repeat homology <FN3B>
F41-96-139-189-235-288-330-386-427-480-/Disulfide bonds: #status predicted
F222-316-348-424-450-479-/Binding site: carbohydrate (Asn) (covalent) #status predicted

Qy 105 KIQLGDLAGRAEILGKTSKIKWVTRRDSALYRCE--VVARNDRKEIDEIVIETVQVQPV 140
C;Species: Mus musculus (house mouse)
C;Date: 160-DV----RFVFLANNVLIQIRGKKTDEGNYRCGRILARG--EINVKDQIVVNPPL 210
C;Accession: A44290; S00382; A29673
R;Barthels, D.; Santoni, M.J.; Wille, W.; Ruppert, C.; Chaix, J.C.; Hirsch, M.R.; Fontec
EMBO J. 6, 907-914, 1987
A;Title: Isolation and nucleotide sequence of mouse NCAM cDNA that codes for a Mr 79,000
A;Reference number: A29673; MUID:87246524; PMID:355553
A;Accession: A29673
A;Molecule type: mRNA
A;Residues: 1-725 <BAR>
A;Cross-references: EMBL:Y00051; NID:953342; PIDN:CAA68263.1; PID:953343
R;Santoni, M.J.; Barthels, D.; Barbas, J.A.; Hirsch, M.R.; Steinmetz, M.; Goridis, C.; W
Nucleic Acids Res. 15, 8621-8641, 1987
A;Title: Analysis of cDNA clones that code for the transmembrane forms of the mouse neur
A;Reference number: S00844; MUID:88067687; PMID:368457
A;Accession: S00844
A;Molecule type: mRNA
A;Residues: 529-809, 1077-1115 <SAN>
A;Cross-references: EMBL:X06328; NID:953322; PIDN:CAA29641.1; PID:981794
R;Barbas, J.A.; Chaix, J.C.; Steinmetz, M.; Goridis, C.
EMBO J. 7, 625-632, 1988
A;Title: Differential splicing and alternative polyadenylation generates distinct NCAM t
A;Reference number: S00844; MUID:88283628; PMID:3396534
A;Accession: S00844
A;Molecule type: DNA
A;Residues: 642-1115 <BAR>
A;Cross-references: EMBL:X07195
R;Barthels, D.; Voppre, G.; Wille, W.
Nucleic Acids Res. 16, 4217-4225, 1988
A;Title: NCAM-80, the large isoform of the neural cell adhesion molecule of the mouse,
A;Reference number: A28281; MUID:88247737; PMID:2454455
A;Accession: A28281
A;Molecule type: mRNA
A;Residues: 804-1081 <BA2>
A;Cross-references: EMBL:X07244; NID:953321; PIDN:CAA30230.1; PID:9929720
R;Rougon, G.; Marshak, D.R.
J. Biol. Chem. 261, 3396-3401, 1986
A;Title: Structural and immunological characterization of the amino-terminal domain of m
A;Reference number: A44290; MUID:86140120; PMID:3512556
A;Accession: A44290
A;Molecule type: protein
A;Residues: 20-36 <RO1>
C;Comment: NCAM mediates cell-cell adhesion via homophilic binding with another NCAM mol
C;Genetics: NCAM
A;Gene: NCAM
A;Map position: 9

Qy 83 KIQLGDLAGRAEILGKTSKIKWVTRRDSALYRCE--VVARNDRKEIDEIVIETVQVQPV 140
C;Species: Mus musculus (house mouse)
C;Date: 160-DV----RFVFLANNVLIQIRGKKTDEGNYRCGRILARG--EINVKDQIVVNPPL 210
C;Accession: A44290; S00382; A29673
R;Barthels, D.; Santoni, M.J.; Wille, W.; Ruppert, C.; Chaix, J.C.; Hirsch, M.R.; Fontec
EMBO J. 6, 907-914, 1987
A;Title: Isolation and nucleotide sequence of mouse NCAM cDNA that codes for a Mr 79,000
A;Reference number: A29673; MUID:87246524; PMID:355553
A;Accession: A29673
A;Molecule type: mRNA
A;Residues: 1-725 <BAR>
A;Cross-references: EMBL:Y00051; NID:953342; PIDN:CAA68263.1; PID:953343
R;Barthels, D.; Santoni, M.J.; Wille, W.; Ruppert, C.; Chaix, J.C.; Hirsch, M.R.; Fontec
EMBO J. 6, 907-914, 1987
A;Title: Isolation and nucleotide sequence of mouse NCAM cDNA that codes for a Mr 79,000
A;Reference number: A29673; MUID:87246524; PMID:355553
A;Accession: A29673
A;Molecule type: mRNA
A;Residues: 1-725 <BAR>
A;Cross-references: EMBL:Y00051; NID:953342; PIDN:CAA68263.1; PID:953343
R;Santoni, M.J.; Barthels, D.; Barbas, J.A.; Hirsch, M.R.; Steinmetz, M.; Goridis, C.; W
Nucleic Acids Res. 15, 8621-8641, 1987
A;Title: Analysis of cDNA clones that code for the transmembrane forms of the mouse neur
A;Reference number: S00844; MUID:88067687; PMID:368457
A;Accession: S00844
A;Molecule type: mRNA
A;Residues: 529-809, 1077-1115 <SAN>
A;Cross-references: EMBL:X06328; NID:953322; PIDN:CAA29641.1; PID:981794
R;Barbas, J.A.; Chaix, J.C.; Steinmetz, M.; Goridis, C.
EMBO J. 7, 625-632, 1988
A;Title: Differential splicing and alternative polyadenylation generates distinct NCAM t
A;Reference number: S00844; MUID:88283628; PMID:3396534
A;Accession: S00844
A;Molecule type: DNA
A;Residues: 642-1115 <BAR>
A;Cross-references: EMBL:X07195
R;Barthels, D.; Voppre, G.; Wille, W.
Nucleic Acids Res. 16, 4217-4225, 1988
A;Title: NCAM-80, the large isoform of the neural cell adhesion molecule of the mouse,
A;Reference number: A28281; MUID:88247737; PMID:2454455
A;Accession: A28281
A;Molecule type: mRNA
A;Residues: 804-1081 <BA2>
A;Cross-references: EMBL:X07244; NID:953321; PIDN:CAA30230.1; PID:9929720
R;Rougon, G.; Marshak, D.R.
J. Biol. Chem. 261, 3396-3401, 1986
A;Title: Structural and immunological characterization of the amino-terminal domain of m
A;Reference number: A44290; MUID:86140120; PMID:3512556
A;Accession: A44290
A;Molecule type: protein
A;Residues: 20-36 <RO1>
C;Comment: NCAM mediates cell-cell adhesion via homophilic binding with another NCAM mol
C;Genetics: NCAM
A;Gene: NCAM
A;Map position: 9

RESULT 8
IJMSNL
neural cell adhesion molecule 1 precursor, GPI-anchored splice form - mouse
N;Alternate names: NCAM-120
C;Species: Mus musculus (house mouse)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 31-Dec-2000
C;Accession: A29673; S00382; A44290
R;Barthels, D.; Santoni, M.J.; Wille, W.; Ruppert, C.; Chaix, J.C.; Hirsch, M.R.; Fontec
EMBO J. 6, 907-914, 1987
A;Title: Isolation and nucleotide sequence of mouse NCAM cDNA that codes for a Mr 79,000
A;Reference number: A29673; MUID:87246524; PMID:355553
A;Accession: A29673
A;Molecule type: mRNA
A;Residues: 1-725 <BAR>
A;Cross-references: EMBL:Y00051; NID:953342; PIDN:CAA68263.1; PID:953343
R;Barbas, J.A.; Chaix, J.C.; Steinmetz, M.; Goridis, C.
EMBO J. 7, 625-632, 1988
A;Title: Differential splicing and alternative polyadenylation generates distinct NCAM t
A;Reference number: S00382; MUID:88283628; PMID:3396534
A;Accession: A44290
A;Molecule type: DNA
A;Residues: 642-656, D', 658-725 <BA2>
A;Cross-references: EMBL:X07195
R;Rougon, G.; Marshak, D.R.
J. Biol. Chem. 261, 3396-3401, 1986
A;Title: Structural and immunological characterization of the amino-terminal domain of m
A;Reference number: A44290; MUID:86140120; PMID:3512556
A;Accession: A44290
A;Molecule type: protein
A;Residues: 20-36 <RO1>
C;Comment: NCAM mediates cell-cell adhesion via homophilic binding with another NCAM mol
C;Genetics: NCAM
A;Gene: NCAM
A;Map position: 9
A;Introns: 701/1
C;Supfamily: neural cell adhesion molecule; fibronectin type III repeat homology; immu
C;Keywords: alternative splicing; cell adhesion; duplication; heparin binding; membrane
F1-1-/Domain: signal sequence #status predicted <SIG>
F1-98-/Domain: immunoglobulin homology <IMM1>
F13-191-/Domain: immunoglobulin homology <IMM2>
F15-15-/Region: heparin binding #status predicted
F16-1-165-/Region: heparin binding
F2-28-290-/Domain: immunoglobulin homology <IMM3>
F26-27-/Region: NCAM binding #status predicted
F32-3-388-/Domain: immunoglobulin homology <IMM4>
F42-40-482-/Domain: immunoglobulin homology <IMM5>
F51-59-/Domain: fibronectin type III repeat homology <FN3A>
F62-685-/Domain: fibronectin type III repeat homology <FN3B>
F41-96-139-189-235-288-330-386-427-480-/Disulfide bonds: #status predicted
F222-316-348-424-450-479-/Binding site: carbohydrate (Asn) (covalent) #status predicted

RESULT 9
IJMSNL
neural cell adhesion molecule 1 precursor, long domain splice form - mouse
N;Alternate names: NCAM-180
C;Species: Mus musculus (house mouse)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 31-Dec-2000
C;Accession: A29673; S00382; A44290
R;Barthels, D.; Santoni, M.J.; Wille, W.; Ruppert, C.; Chaix, J.C.; Hirsch, M.R.; Fontec
EMBO J. 6, 907-914, 1987
A;Title: Isolation and nucleotide sequence of mouse NCAM cDNA that codes for a Mr 79,000
A;Reference number: A29673; MUID:87246524; PMID:355553
A;Accession: A29673
A;Molecule type: mRNA
A;Residues: 1-568, 'T', 550-571, 'T', 573-574, 'D', 576-588, 'MQPS', 593, 'S', 595-599, 'P', 601, 'L'
A;Cross-references: EMBL:Y00051; NID:953342; PIDN:CAA68263.1; PID:953343
R;Santoni, M.J.; Barthels, D.; Barbas, J.A.; Hirsch, M.R.; Steinmetz, M.; Goridis, C.; W
Nucleic Acids Res. 15, 8621-8641, 1987
A;Title: Analysis of cDNA clones that code for the transmembrane forms of the mouse neur
A;Reference number: S00844; MUID:88067687; PMID:368457
A;Accession: S00844
A;Molecule type: mRNA
A;Residues: 529-809, 1077-1115 <SAN>
A;Cross-references: EMBL:X06328; NID:953322; PIDN:CAA29641.1; PID:981794
R;Barbas, J.A.; Chaix, J.C.; Steinmetz, M.; Goridis, C.
EMBO J. 7, 625-632, 1988
A;Title: Differential splicing and alternative polyadenylation generates distinct NCAM t
A;Reference number: S00844; MUID:88283628; PMID:3396534
A;Accession: S00844
A;Molecule type: DNA
A;Residues: 642-1115 <BAR>
A;Cross-references: EMBL:X07195
R;Barthels, D.; Voppre, G.; Wille, W.
Nucleic Acids Res. 16, 4217-4225, 1988
A;Title: NCAM-80, the large isoform of the neural cell adhesion molecule of the mouse,
A;Reference number: A28281; MUID:88247737; PMID:2454455
A;Accession: A28281
A;Molecule type: mRNA
A;Residues: 804-1081 <BA2>
A;Cross-references: EMBL:X07244; NID:953321; PIDN:CAA30230.1; PID:9929720
R;Rougon, G.; Marshak, D.R.
J. Biol. Chem. 261, 3396-3401, 1986
A;Title: Structural and immunological characterization of the amino-terminal domain of m
A;Reference number: A44290; MUID:86140120; PMID:3512556
A;Accession: A44290
A;Molecule type: protein
A;Residues: 20-36 <RO1>
C;Comment: NCAM mediates cell-cell adhesion via homophilic binding with another NCAM mol
C;Genetics: NCAM
A;Gene: NCAM
A;Map position: 9
A;Introns: 701/1
C;Supfamily: neural cell adhesion molecule; fibronectin type III repeat homology; immu
C;Keywords: alternative splicing; cell adhesion; duplication; heparin binding; membrane
F1-1-/Domain: signal sequence #status predicted <SIG>
F1-98-/Domain: immunoglobulin homology <IMM1>
F13-191-/Domain: immunoglobulin homology <IMM2>
F15-15-/Region: heparin binding #status predicted
F16-1-165-/Region: heparin binding
F2-28-290-/Domain: immunoglobulin homology <IMM3>
F26-27-/Region: NCAM binding #status predicted
F32-3-388-/Domain: immunoglobulin homology <IMM4>
F42-40-482-/Domain: immunoglobulin homology <IMM5>
F51-59-/Domain: fibronectin type III repeat homology <FN3A>
F62-685-/Domain: fibronectin type III repeat homology <FN3B>
F41-96-139-189-235-288-330-386-427-480-/Disulfide bonds: #status predicted
F222-316-348-424-450-479-/Binding site: carbohydrate (Asn) (covalent) #status predicted

RESULT 9
IJMSNL
neural cell adhesion molecule 1 precursor, long domain splice form - mouse
N;Alternate names: NCAM-180
C;Species: Mus musculus (house mouse)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 31-Dec-2000
C;Accession: A29673; S00382; A44290
R;Barthels, D.; Santoni, M.J.; Wille, W.; Ruppert, C.; Chaix, J.C.; Hirsch, M.R.; Fontec
EMBO J. 6, 907-914, 1987
A;Title: Isolation and nucleotide sequence of mouse NCAM cDNA that codes for a Mr 79,000
A;Reference number: A29673; MUID:87246524; PMID:355553
A;Accession: A29673
A;Molecule type: mRNA
A;Residues: 1-568, 'T', 550-571, 'T', 573-574, 'D', 576-588, 'MQPS', 593, 'S', 595-599, 'P', 601, 'L'
A;Cross-references: EMBL:Y00051; NID:953342; PIDN:CAA68263.1; PID:953343
R;Santoni, M.J.; Barthels, D.; Barbas, J.A.; Hirsch, M.R.; Steinmetz, M.; Goridis, C.; W
Nucleic Acids Res. 15, 8621-8641, 1987
A;Title: Analysis of cDNA clones that code for the transmembrane forms of the mouse neur
A;Reference number: S00844; MUID:88067687; PMID:368457
A;Accession: S00844
A;Molecule type: DNA
A;Residues: 529-809, 1077-1115 <SAN>
A;Cross-references: EMBL:X06328; NID:953322; PIDN:CAA29641.1; PID:981794
R;Barbas, J.A.; Chaix, J.C.; Steinmetz, M.; Goridis, C.
EMBO J. 7, 625-632, 1988
A;Title: Differential splicing and alternative polyadenylation generates distinct NCAM t
A;Reference number: S00844; MUID:88283628; PMID:3396534
A;Accession: S00844
A;Molecule type: DNA
A;Residues: 642-1115 <BAR>
A;Cross-references: EMBL:X07195
R;Barthels, D.; Voppre, G.; Wille, W.
Nucleic Acids Res. 16, 4217-4225, 1988
A;Title: NCAM-80, the large isoform of the neural cell adhesion molecule of the mouse,
A;Reference number: A28281; MUID:88247737; PMID:2454455
A;Accession: A28281
A;Molecule type: mRNA
A;Residues: 804-1081 <BA2>
A;Cross-references: EMBL:X07244; NID:953321; PIDN:CAA30230.1; PID:9929720
R;Rougon, G.; Marshak, D.R.
J. Biol. Chem. 261, 3396-3401, 1986
A;Title: Structural and immunological characterization of the amino-terminal domain of m
A;Reference number: A44290; MUID:86140120; PMID:3512556
A;Accession: A44290
A;Molecule type: protein
A;Residues: 20-36 <RO1>
C;Comment: NCAM mediates cell-cell adhesion via homophilic binding with another NCAM mol
C;Genetics: NCAM
A;Gene: NCAM
A;Map position: 9
A;Introns: 701/1; 770/2; 809/2; 1076/2

Query Match 10.5%; Score 171.5; DB 1; length 725;

R;Adachi, M.; Sekiya, M.; Arimura, Y.; Takekawa, M.; Ichih, F.; Hinoda, Y.; Imai, K.; Yad
Cancer Res. 52, 737-740, 1992

A;Title: Protein-tyrosine phosphatase expression in pre-B cell NALM-6.

A;Reference number: A44929; MUID:92119637; PMID:1370651

A;Accession: B44929

A;Molecule type: mRNA

A;Residues 1756-1804, 'C', 1806-1845 <ADA>

A;Cross-references: GB:SB8086; NID:24345; PIDN:AA821147.1; PID:9243546

A;Experimental source: Pre-B cell NALM-6

A;Note: sequence extracted from NCBI backbone (NCBIN:78086, NCBI:78087)

A;Note: the authors did not report the entire codon for residue 90

C;Genetics:

A;Gene: GDB:PTP4D

A;Cross-references: GDB:131384; OMMI:601598

A;Map position: 9p24-9p24

C;Superfamily: leukocyte antigen-related protein; fibronectin type III repeat homology; C;Key words: glycoprotein; phosphoprotein; phosphoric monoester hydrolase; transmembrane

F;38-100/Domain: immunoglobulin homology <IMM1>

F;140-209/Domain: immunoglobulin homology <IMM2>

F;71-81/Domain: immunoglobulin homology <IMM3>

F;1293-1912/Domain: leukocyte common antigen cytosolic domain homology <3FR>

F;1669-1892/Domain: protein-tyrosine phosphatase homology <PTP2>

F;153/Active site: Cys (phosphocysteine intermediate) #status predicted

F;1559/Binding site: substrate phosphate (Arg) #status predicted

F;1844/Active site: Cys (phosphocysteine intermediate) #status predicted

F;1850/Binding site: substrate phosphate (Arg) #status predicted

Query Match 10.4%; Score 169.5; DB 2; Length 1912; Best Local Similarity 28.6%; Pred. No. 1; 4e-05; Matches 65; Conservative 35; Mismatches 76; Indels 51; Gaps 13; Qy 39 RPPWQESSEVELSCITSDQSPDPR-IEW---KKIQDEQTYVFPDKNQKQDLAGRA 92 Db 28 RPPWQESSEVELSCITSDQSPDPR-IEW---KKIQDEQTYVFPDKNQKQDLAGRA 92 Db 80 SVRIQPLR---TPRDEAIVEC---VASNNVGBI-SYSTRLVRED---QIPRKFPT 127 Qy 153 GKM-----ATHCQSEGHPRPHYSYRNDVPLPTDSRANPRFRNSSHNSE 200 Db 128 IDMPGQKLKVERTATMCLAAAS-GNPDPETWFKDFLPVDT-SNNNGRIK---QLRSE 181 Qy 201 T-----GTVFTAVHKDSSGYYCTASNDGGSARGEEQEMEVYDL 240 Db 182 SIGGTPTRGALQTEQESSDQGYEVATNAGTRYSPAPNLYVREL 228

RESULT 12

A39712 kinase-like protein klg precursor - chicken

C;Species: Gallus gallus (chicken)

C;Date: 08-Nov-1991 #sequence_revision 08-Nov-1991 #text_change 24-Sep-1999

C;Accession: A39712

R;Chou, Y.H.; Hayman, M.J.

Proc. Natl. Acad. Sci. U.S.A. 88, 4897-4901, 1991

A;Title: Characterization of a member of the immunoglobulin gene superfamily that possit

A;Reference number: A39712; MUID:91271300; PMID:1711213

A;Accession: A39712

A;Status: preliminary

A;Molecule type: mRNA

A;Residues: 1-1051 <CHO>

A;Cross-references: GB:63437; NID:9212235; PIDN:AAA48933.1; PID:9212236

C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase homolog

C;Keywords: ATP

F;775-1046/Domain: protein kinase homology <Kin>

F;783-791/Region: protein kinase ATP-binding motif

Query Match 10.1%; Score 164.5; DB 2; Length 1051; Best Local Similarity 24.5%; Pred. No. 1; 8e-05; Matches 66; Conservative 35; Mismatches 109; Indels 59; Gaps 11;

RESULT 13

S18252 heparan sulfate proteoglycan - mouse

N;Alternate names: perlecan

C;Species: Mus musculus (house mouse)

C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 05-Nov-1999

C;Accession: S18252; A31917; B31917; S66460

R;Noonan, D.M.; Pule, A.; Valentine, P.; Cai, S.; Horigan, E.; Sasaki, M.; Yamada, Y.; Ha J. Biol. Chem. 266, 22939-22947, 1991

A;Title: The complete sequence of perlecan, a basement membrane heparan sulfate proteoglycan adhesion molecule.

A;Reference number: S18252; MUID:92078153; PMID:1744087

A;Accession: S18252

A;Molecule type: mRNA

A;Residues 1-3707 <NOO>

A;Cross-references: EMBL:M77174; NID:9200295; PIDN:AAA39911.1; PID:9200295

R;Noonan, D.M.; Horigan, E.A.; Ledbetter, S.R.; Vogeli, G.; Sasaki, M.; Yamada, Y.; Hass J. Biol. Chem. 263, 16379-16387, 1988

A;Title: Identification of cDNA clones encoding different domains of the basement membrane

A;Reference number: A92680; MUID:89034110; PMID:2972708

A;Accession: A31917

A;Molecule type: mRNA

A;Residues: 1-1601 <NO2>

A;Accession: B31917

A;Cross-references: GB:J04054; NID:9200252; PIDN:AAA39899.1; PID:9200252

A;Molecule type: mRNA

A;Residues: 1-3707 <NOO>

A;Accession: S18252

A;Cross-references: GB:J04055; NID:9200295; PIDN:AAA39912.1; PID:9200301

R;Schulze, B.; Mann, K.; Battistutta, R.; Wiedemann, H.; Timpl, R.

Eur. J. Biochem. 231, 551-556, 1995

A;Title: Structural properties of recombinant domain III-3 of perlecan containing a globular domain

A;Reference number: S66460; MUID:937782; PMID:649154

A;Accession: S66460

A;Molecule type: protein

A;Residues: 1272-1274, 'X', 1276, 'X', 1278-1279 <SCH>

C;Superfamily: LDL receptor ligand-binding repeat homology; EGF homology; laminin G repeat homology

C;Keywords: glycoprotein

F;199-234/Domain: LDL receptor ligand-binding repeat homology <LDL1>

F;285-319/Domain: LDL receptor ligand-binding repeat homology <LDL2>

F;325-359/Domain: LDL receptor ligand-binding repeat homology <LDL3>

F;368-403/Domain: LDL receptor ligand-binding repeat homology <LDL4>

F;1764-811/Domain: laminin-type EGF-like homology <LEG>

F;1156-1206/Domain: laminin-type EGF-like homology <LEG1>

F;1563-1610/Domain: laminin-type EGF-like homology <LEG2>

F;1613-1663/Domain: laminin-type EGF-like homology <LEG3>

F;13163-3198/Domain: EGF homology <EGF>

F;3270-3423/Domain: laminin G repeat homology <LG2>

F;3464-3492/Domain: EGF homology <EGF7>

F;1256, 1891, 2336, 2394, 2427/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 10.1%; Score 164.5; DB 2; Length 3707;

Query Match	10.0%	Score 163.5;	DB 1;	Length 853;
Best Local Similarity	27.3%	Pred. No. 1.	1.7e-05	
Matches	63;	Conservative	34; Mismatches	89; Indels 45; Gaps 11

Search completed: December 15, 2003, 14:53:06
Job time : 22 secs

Db 4072 RVHFESTDDGTQRVLVIEDSKTDDQNYR 409

84 289 - - - - DGVNYT - - - - RTDREGDER 303

Qy	199	SEGTGLVFTAVHKQDGSQYCYCISNDAG-----	-SARCEBQ	233
Db	3983	DGTORLTIVNMAKUDMDYEYCEASNEFGDWSDVLTIVKPAQVAAPGFPEKLSAIVQKET	-----	4047
Qy	234	EMEVYDLDNTGGIIGGVVLLAVLALITLGICCAYRRGYFINNKQDGESKNPKP-----	-----	288

QY	93	ELIGKTSKLKUNVTRRDSLALYRC-----	-----WARNRKEIBIVIET-TVQVK	138
Db	3884	-----TLEFDNVTQADAGEYRCBENEYGSAWTEGPIINTLEGAPKIDGAPDFLQPVK	393.	
QY	139	PVTPVCRVPKAVPVGMMATHCQESSEGHIRPHYSWVNDVPLPTDSRANPRFRSSSHLN	198	
Db	3938	PA-----VVTIGETATLEGKIS-GKOPSKVVKYNGEL-----KPSDRVYIENLD	3983	

Qy	45	EFESVBLSCLITDQS-----DRIEKK--IQDEQRTVVFDDNIQGDLAGRA	92
Db	3828	EFVLLRSCLTVERQAIILKCKVKGKPRKIKWTKGEVEMSAVRRAEHKKDDGL---	3881

A;CROSS-References: LMSL:AR03131; PIOM:AB54132;1; GSPDB:UN00019; CSp:unc-89
 A;Experimental source: strain Bristol N2; clone C09d1
 C;Genetics:
 A;Gene: CESP:unc-89
 A;Map position: 1
 A;Introns: 17/2; 108/3; 154/2; 211/2; 265/3; 326/2; 352/3; 426/2; 454/1; 500/1
 /3; 5917/1; 6027/1; 6051/3; 6153/2; 6552/3; 6609/1

submitted to the EMBL Data Library, May 1997
A;Description: The sequence of *C. elegans* cosmid C09D1.
A;Reference number: 220679
A;Accession: T29157
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;passcode: 16642<007>

C;Species: *Caenorhabditis elegans*
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 03-Dec-1999
C;Accession: T29957

129/5/

BESCHREIBUNG 15

Db 262 YLFSDSSE-----LTIRKVDKNDEAEGVTAENKAG----EQDASH 300

QY 130 VIELTVQVKPVTPVCR - VPKAVPVGKMATLHCQESEGHHPRPHYSWYRNDVPLPTDSRAN 187

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